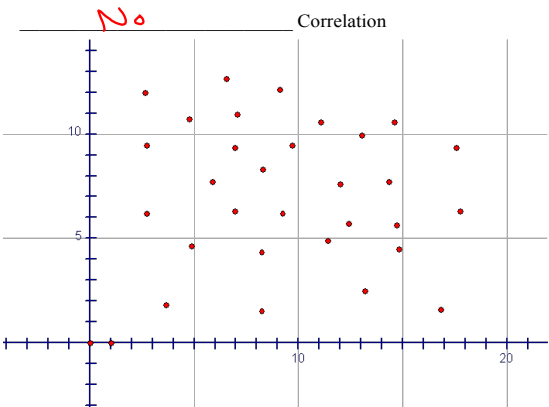
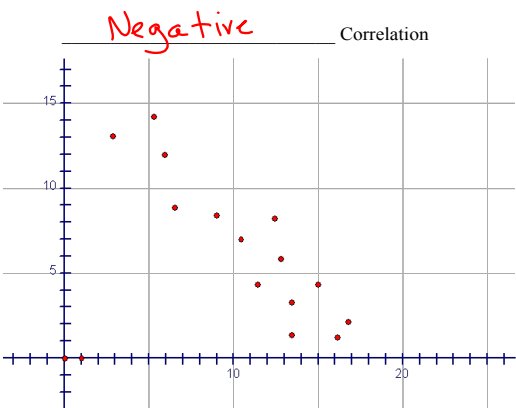
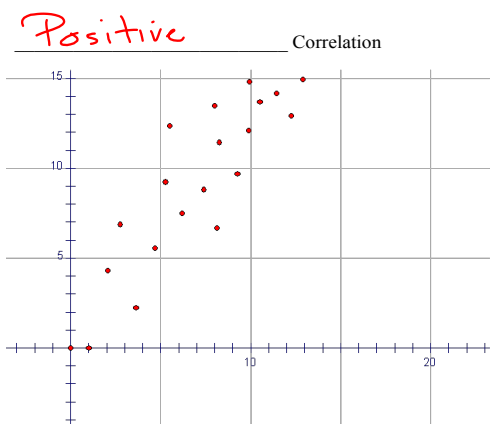


2-5 Modeling Real World Data

Scatter plot--set of data graphed as ordered pairs



Line of Best Fit--line that closely approximates the data

- an equation that allows you to make a prediction
- extrapolation--make a prediction outside of data
- interpolation--make a prediction inside of data
- outlier

Example 1: The keyboarding speed of students improves the longer they practice. The table below reflects the number of words per minute students can type, given their experience in weeks.

Experience (weeks)	Speed (wpm)
4	33
7	45
8	49
1	20
6	40
3	30
5	38
2	22
9	52
6	44
7	42
10	55

Plot the data.

Sketch the line of best fit.

Find the equation of the line.

$$y = 4x + 16$$

Use the line to make a prediction for the number of words per minute at 14 weeks.

$$\text{20 wpm } y = 4(14) + 16$$

